\_\_\_\_\_\_

Sequence Listing was accepted.

If you need help call the Patent Electronic Business Center at (866) 217-9197 (toll free).

Reviewer: Anne Corrigan

Timestamp: [year=2008; month=7; day=16; hr=13; min=20; sec=4; ms=144; ]

\_\_\_\_\_\_

## Validated By CRFValidator v 1.0.3

Application No: 10553869 Version No: 2.0

0

Input Set:

Output Set:

**Started:** 2008-06-13 16:40:14.201 **Finished:** 2008-06-13 16:40:28.694

**Elapsed:** 0 hr(s) 0 min(s) 14 sec(s) 493 ms

Total Warnings: 93

No. of SeqIDs Defined: 93

Actual SeqID Count: 93

Total Errors:

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Input Set:

Output Set:

**Started:** 2008-06-13 16:40:14.201 **Finished:** 2008-06-13 16:40:28.694

**Elapsed:** 0 hr(s) 0 min(s) 14 sec(s) 493 ms

Total Warnings: 93
Total Errors: 0

No. of SeqIDs Defined: 93

Actual SeqID Count: 93

Error code Error Description

This error has occured more than 20 times, will not be displayed

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	Arg Cys Gly Gl 35	y Phe Leu :	Ile Gln Asp	Asp Phe Val	Leu Thr							
Ala Ala 50	His Cys Trp Gl	y Ser Ser : 55	Ile Asn Val	Thr Leu Gly	Ala His							
Asn Ile 65	Lys Glu Gln Gl 70	u Pro Thr (	Gln Gln Phe 75	Ile Pro Val	Lys Arg 80							
Pro Ile	Pro His Pro Al 85	a Tyr Asn l	Pro Lys Asn 90	Phe Ser Asn	Asp Ile 95							

Met Leu Leu Gln Leu Glu Arg Lys Ala Lys Arg Thr Arg Ala Val Gln 100 105

110

Pro Leu Arg Leu Pro Ser Asn Lys Ala Gln Val Lys Pro Gly Gln Thr 115 120 125										
Cys Ser Val Ala Gly Trp Gly Gln Thr Ala Pro Leu Gly Lys His Ser 130 135 140										
His Thr Leu Gln Glu Val Lys Met Thr Val Gln Glu Asp Arg Lys Cys 145 150 155 160										
Glu Ser Asp Leu Arg His Tyr Tyr Asp Ser Thr Ile Glu Leu Cys Val 165 170 175										
Gly Asp Pro Glu Ile Lys Lys Thr Ser Phe Lys Gly Asp Ser Gly Gly 180 185 190										
Pro Leu Val Cys Asn Lys Val Ala Gln Gly Ile Val Ser Tyr Gly Arg 195 200 205										
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His Ser Arg Pro Tyr Met Ala Tyr Leu Met Ile Trp Asp Gln Lys Ser 20 25 30										

Leu Lys Arg Cys Gly Gly Phe Leu Ile Gln Asp Asp Phe Val Leu Thr 35 40 45

Ala Ala His Cys Trp Gly Ser Ser Ile Asn Val Thr Leu Gly Ala His Asn Ile Lys Glu Gln Glu Pro Thr Gln Gln Phe Ile Pro Val Lys Arg 65 70 75 80 Pro Ile Pro His Pro Ala Tyr Asn Pro Lys Asn Phe Ser Asn Asp Ile 90 95 Met Leu Leu Gln Leu Glu Arg Lys Ala Lys Arg Thr Arg Ala Val Gln 100 105 110 Pro Leu Arg Leu Pro Ser Asn Lys Ala Gln Val Lys Pro Gly Gln Thr 115 120 125 Cys Ser Val Ala Gly Trp Gly Gln Thr Ala Pro Leu Gly Lys His Ser 130 135 140 His Thr Leu Gln Glu Val Lys Met Thr Val Gln Glu Asp Arg Lys Cys 150 155 160 145 Glu Ser Asp Leu Arg His Tyr Tyr Asp Ser Thr Ile Glu Leu Cys Val 165 170 175 Gly Asp Pro Glu Ile Lys Lys Thr Ser Phe Lys Gly Asp Ser Gly Gly 180 185 190 Pro Leu Val Cys Asn Lys Val Ala Gln Gly Ile Val Ser Tyr Gly Arg 195 200 205 Asn Asn Gly Met Pro Pro Arg Ala Cys Thr Lys Val Ser Ser Phe Val 210 215 220

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His His His

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His Ser Arg Pro Tyr Met Ala Tyr Leu Met Ile Trp Asp Gln Lys Ser 20 25 30

Leu Lys Arg Cys Gly Gly Phe Leu Ile Gln Asp Asp Phe Val Leu Thr 35 40 45

Ala Ala His Cys Trp Gly Ser Ser Ile Asn Val Thr Leu Gly Ala His 50 60

Asn Ile Lys Glu Gln Glu Pro Thr Gln Gln Phe Ile Pro Val Lys Arg 65 70 75 80

Pro Ile Pro His Pro Ala Tyr Asn Pro Lys Asn Phe Ser Asn Asp Ile 85 90 95

Met Leu Leu Gln Leu Glu Arg Lys Ala Lys Arg Thr Arg Ala Val Gln
100 105 110

Pro Leu Arg Leu Pro Ser Asn Lys Ala Gln Val Lys Pro Gly Gln Thr 115 120 125

Cys Ser Val Ala Gly Trp Gly Gln Thr Ala Pro Leu Gly Lys His Ser 130 135 140

Glu Ser Asp Leu Arg His Tyr Tyr Asp Ser Thr Ile Glu Leu Cys Val 165 170 175

Gly Asp Pro Glu Ile Lys Lys Thr Ser Phe Lys Gly Asp Ser Gly Gly
180 185 190

Pro Leu Val Cys Asn Lys Val Ala Gln Gly Ile Val Ser Tyr Gly Arg 195 200 205 Asn Asn Gly Met Pro Pro Arg Ala Cys Thr Lys Val Ser Ser Phe Val 210 215 220

His Trp Ile Lys Lys Thr Met Lys Arg Tyr Leu Asn Ser His His His 225 235 230 240

His His His

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His Ser Arg Pro Tyr Met Ala Tyr Leu Met Ile Trp Asp Gln Lys Ser 20 25 30

Leu Lys Arg Cys Gly Gly Phe Leu Ile Gln Asp Asp Phe Val Leu Thr  $35 \hspace{1.5cm} 40 \hspace{1.5cm} 45 \hspace{1.5cm}$ 

Ala Ala His Cys Trp Gly Ser Ser Ile Asn Val Thr Leu Gly Ala His 50 60

Asn Ile Lys Glu Gln Glu Pro Thr Gln Gln Phe Ile Pro Val Lys Arg
65 70 75 80

Pro Ile Pro His Pro Ala Tyr Asn Pro Lys Asn Phe Ser Asn Asp Ile 85 90 95

Met Leu Leu Gl<br/>n Leu Glu Arg Lys Ala Lys Arg Thr Arg Ala Val Gl<br/>n 100 105 110

Pro Leu Arg Leu Pro Ser Asn Lys Ala Gln Val Lys Pro Gly Gln Thr 115 120 125

Cys Ser Val Ala Gly Trp Gly Gln Thr Ala Pro Leu Gly Lys His Ser 130 135 140

His Thr Leu Gln Glu Val Lys Met Thr Val Gln Glu Asp Arg Lys Cys 150 155 Glu Ser Asp Leu Arg His Tyr Tyr Asp Ser Thr Ile Glu Leu Cys Val 165 170 175 Gly Asp Pro Glu Ile Lys Lys Thr Ser Phe Lys Gly Asp Ser Gly Gly 180 185 190 Pro Leu Val Cys Asn Lys Val Ala Gln Gly Ile Val Ser Tyr Gly Arg 195 200 205 Asn Asn Gly Met Pro Pro Arg Ala Ser Thr Lys Val Ser Ser Phe Val 210 215 220 His Trp Ile Lys Lys Thr Met Lys Arg Tyr Leu Asn Ser His His His 230 235 His His His <210> 5 <211> 243 <212> PRT <213> Artificial <220> <223> Synthetic; pro-IEPD-GrB-H6 C228A <400> 5 Met Gly Ser Ile Glu Pro Asp Ile Ile Gly Gly His Glu Ala Lys Pro 1 5 10 His Ser Arg Pro Tyr Met Ala Tyr Leu Met Ile Trp Asp Gln Lys Ser 20 25 30 Leu Lys Arg Cys Gly Gly Phe Leu Ile Gln Asp Asp Phe Val Leu Thr 40 45 35 Ala Ala His Cys Trp Gly Ser Ser Ile Asn Val Thr Leu Gly Ala His 50 55 60

Asn Ile Lys Glu Gln Glu Pro Thr Gln Gln Phe Ile Pro Val Lys Arg

65 70 75 80

Pro Ile Pro His Pro Ala Tyr Asn Pro Lys Asn Phe Ser Asn Asp Ile 85 90 95

Met Leu Leu Gl<br/>n Leu Glu Arg Lys Ala Lys Arg Thr Arg Ala Val Gl<br/>n 100 105 110

Pro Leu Arg Leu Pro Ser Asn Lys Ala Gln Val Lys Pro Gly Gln Thr 115 120 125

Cys Ser Val Ala Gly Trp Gly Gln Thr Ala Pro Leu Gly Lys His Ser 130 135 140

Glu Ser Asp Leu Arg His Tyr Tyr Asp Ser Thr Ile Glu Leu Cys Val 165 170 175

Gly Asp Pro Glu Ile Lys Lys Thr Ser Phe Lys Gly Asp Ser Gly Gly 180 185 190

Pro Leu Val Cys Asn Lys Val Ala Gln Gly Ile Val Ser Tyr Gly Arg 195 200 205

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His Trp Ile Lys Lys Thr Met Lys Arg Tyr Leu Asn Ser His His His 225 235 240

His His His

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His	Ser	Arg	Pro 20	Tyr	Met	Ala	Tyr	Leu 25	Met	Ile	Trp	Asp	Gln 30	Lys	Ser
Leu	Lys	Arg 35	Суз	Gly	Gly	Phe	Leu 40	Ile	Gln	Asp	Asp	Phe 45	Val	Leu	Thr
Ala	Ala 50	His	Cys	Trp	Gly	Ser 55	Ser	Ile	Asn	Val	Thr 60	Leu	Gly	Ala	His
Asn 65	Ile	Lys	Glu	Gln	Glu 70	Pro	Thr	Gln	Gln	Phe 75	Ile	Pro	Val	Lys	Arg 80
			His	85		-			90					95	
			Gln 100				_	105	_				110		
		115	Leu				120					125			
_	130		Ala			135					140		_		
145			Gln		150	-				155		-		-	160
			Glu	165		_	_		170					175	
			180 Cys					185					190		
		195	Met		_		200					205	_		
17211	210	υ±y	1100	110	110	215	1110			-ya	220	DCI	DCI	. 116	vui

His Trp Ile Lys Lys Thr Met Lys Arg Tyr Leu Asn Ser His His His

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His His His

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His Ser Arg Pro Tyr Met Ala Tyr Leu Met Ile Trp Asp Gln Lys Ser 20 25 30

Leu Lys Arg Cys Gly Gly Phe Leu Ile Gln Asp Asp Phe Val Leu Thr 35 40 45

Ala Ala His Cys Trp Gly Ser Ser Ile Asn Val Thr Leu Gly Ala His 50 60

Asn Ile Lys Glu Gln Glu Pro Thr Gln Gln Phe Ile Pro Val Lys Arg 65 70 75 80

Pro Ile Pro His Pro Ala Tyr Asn Pro Lys Asn Phe Ser Asn Asp Ile 85 90 95

Met Leu Leu Gln Leu Glu Arg Lys Ala Lys Arg Thr Arg Ala Val Gln 100 105 110

Pro Leu Arg Leu Pro Ser Asn Lys Ala Gl<br/>n Val Lys Pro Gly Gl<br/>n Thr\$115 \$120 \$125

Cys Ser Val Ala Gly Trp Gly Gln Thr Ala Pro Leu Gly Lys His Ser 130 135 140

Glu Ser Asp Leu Arg His Tyr Tyr Asp Ser Thr Ile Glu Leu Cys Val 165 170 175 Gly Asp Pro Glu Ile Lys Lys Thr Ser Phe Lys Gly Asp Ser Gly Gly 180 185 190 Pro Leu Val Cys Asn Lys Val Ala Gln Gly Ile Val Ser Tyr Gly Arg 195 200 Asn Asn Gly Met Pro Pro Arg Ala Val Thr Lys Val Ser Ser Phe Val 210 215 220 His Trp Ile Lys Lys Thr Met Lys Arg Tyr Leu Asn Ser His His 225 230 235 240 His His His <210> 8 <211> 243 <212> PRT <213> Artificial <220> <223> Synthetic; pro-IEPD-GrB-H6 C228F <400> 8 Met Gly Ser Ile Glu Pro Asp Ile Ile Gly Gly His Glu Ala Lys Pro 1 5 10 15 His Ser Arg Pro Tyr Met Ala Tyr Leu Met Ile Trp Asp Gln Lys Ser 20 25 30 Leu Lys Arg Cys Gly Gly Phe Leu Ile Gln Asp Asp Phe Val Leu Thr 35 40 45 Ala Ala His Cys Trp Gly Ser Ser Ile Asn Val Thr Leu Gly Ala His 55

Pro Ile Pro His Pro Ala Tyr Asn Pro Lys Asn Phe Ser Asn Asp Ile 85 90 95

Asn Ile Lys Glu Gln Glu Pro Thr Gln Gln Phe Ile Pro Val Lys Arg

70

65

75

Met Leu Gln Leu Glu Arg Lys Ala Lys Arg Thr Arg Ala Val Gln 100 105 Pro Leu Arg Leu Pro Ser Asn Lys Ala Gln Val Lys Pro Gly Gln Thr 115 120 125 Cys Ser Val Ala Gly Trp Gly Gln Thr Ala Pro Leu Gly Lys His Ser 130 135 140 His Thr Leu Gln Glu Val Lys Met Thr Val Gln Glu Asp Arg Lys Cys 150 155 160 Glu Ser Asp Leu Arg His Tyr Tyr Asp Ser Thr Ile Glu Leu Cys Val 165 170 Gly Asp Pro Glu Ile Lys Lys Thr Ser Phe Lys Gly Asp Ser Gly Gly 180 185 190 Pro Leu Val Cys Asn Lys Val Ala Gln Gly Ile Val Ser Tyr Gly Arg 200 205 195 Asn Asn Gly Met Pro Pro Arg Ala Phe Thr Lys Val Ser Ser Phe Val 210 215 220

His Trp Ile Lys Lys Thr Met Lys Arg Tyr Leu Asn Ser His His His